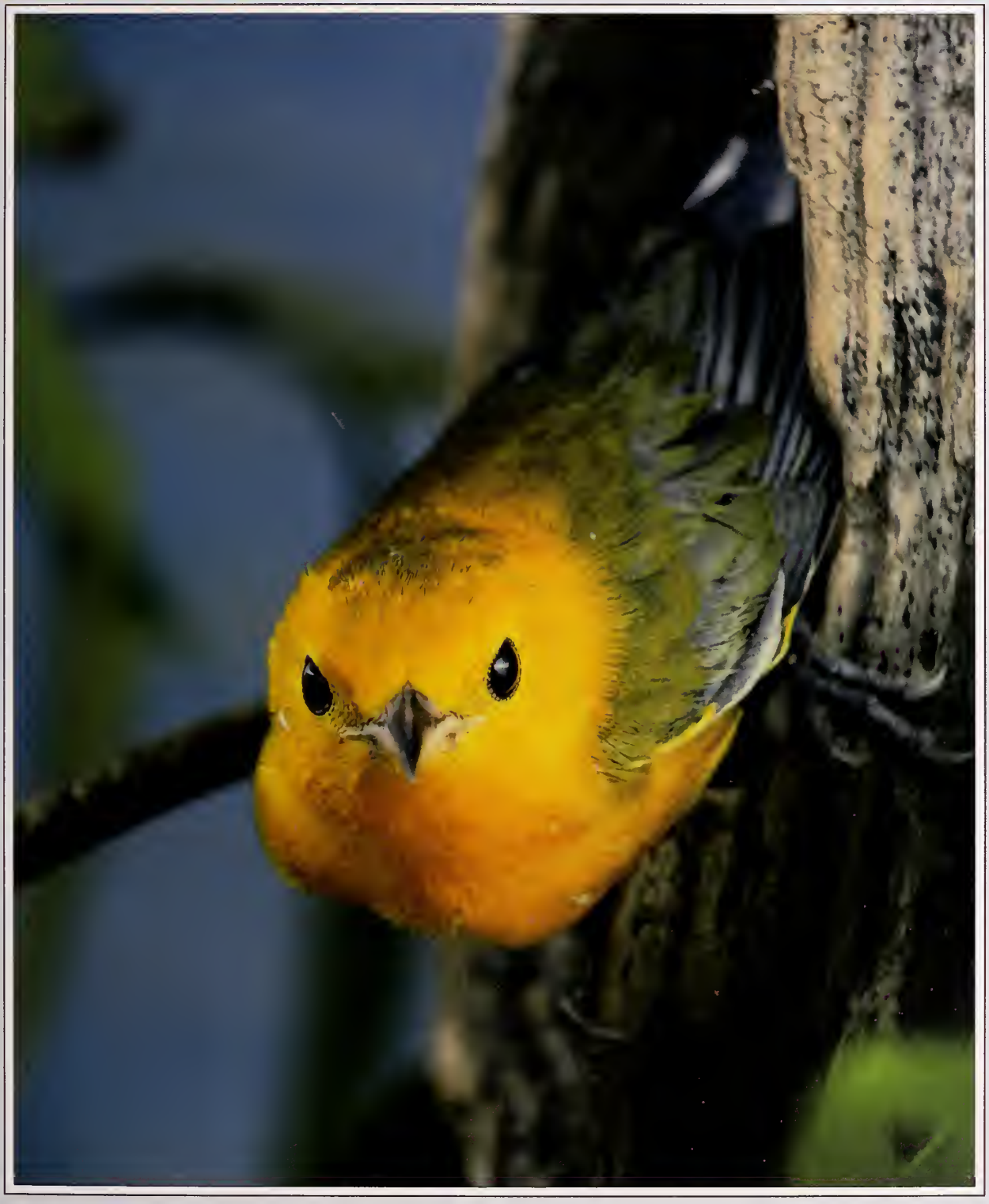
VIRGINIA WILDLIFE

MAY 1993 ONE DOLLAR



Out on a Limb

The other day I opened up the 1928 edition of *Game and Fish Conservationist*, a precursor to *Virginia Wildlife*, and read Rev. Noel J. Allen's piece reprinted from the *Religious Herald* about the "viper trash" we call a housecat: "...an unnatural animal of revolting nature," he wrote, "unclean and bloodthirsty, past all toleration, utterly incapable of real affection for human beings...It remained for Egypt to discover the one and only one redeeming trait of these snaky wretches--they are excellent as compost." That was just the beginning.

We didn't mind speaking our minds in the good old days, even if we were pretty nasty about it. But, 65 years of good science has taken the emotion out of us and turned us sensible. The decades of data churned out by dedicated biologists have helped us realize that there really are some gray areas when it comes to environmental problems and solutions. We've finally accepted the fact that the world is a pretty complex place and there is no sense in going around damning a species just because you don't personally like what it happens to be doing for a living.

On the other hand, though it's admirable to stop viciously hating other species, it seems that in our evolution toward a more civilized and compassionate state of mind we are sometimes more concerned about offending one another than standing up for what we believe in. Passion is out. Ritalin is in. It's not as easy as it once was to find someone willing to risk shocking the majority with a new and passionate idea.

We've become particularly tame and politically correct when it comes to the environment. Recycling is in. Hunting is...not. As sportsmen, we daren't come out and loudly proclaim our love for the hunt and its boisterous, sorrowful, and energizing ritual of life and death anymore. We daren't talk to strangers about blood and guts, our love for trapping, or our obsession with guns. Why? Mostly because we don't feel like having to defend a leg-hold trap, the glory of death, or the NRA to strangers.

Times have changed. Two generations ago the president of the United States was the champion of the conservation movement, leading the way because he *was* a sportsman. As a hunter, Theodore Roosevelt outfoxed Congress time and time again in brilliant moves to protect millions of wilderness from development. There was a time when the words "conservationist" and "sportsman" were synonymous.

Not anymore. Today, we lay low. We stick to our kind and grumble amongst ourselves about the loss of habitat and hunting lands and the urbanization of our kids. Others have taken up the call to arms: Earth First!, Sierra Club, Defenders of Wildlife, the Nature Conservancy. The sportsmen who were leaders of the conservation movement in the 1920s and 1930s never would have dreamed that someday "conservation" and "environmentalism" would become national buzzwords, spawning popular supermarkets carrying organically grown vegetables and meat, and campaigns to save wildlife and rain forests, and the water and air we breathe. Never before have so many people become so *interested* in the health of our Earth. It's cool to be "green." Our public relations campaign has worked.

But, having spawned the movement, protected it, and funded it for so many years, we hunters and fishermen have faded into the background, emerging only to talk and act with our own kind. It strikes us, therefore, as a terrible injustice to find ourselves mocked, attacked, and spurned today by some groups. But the truth is that the environmental movement is no longer riding on our coattails; we have been left behind, trampled underneath its exuberant rush toward the mainstream.

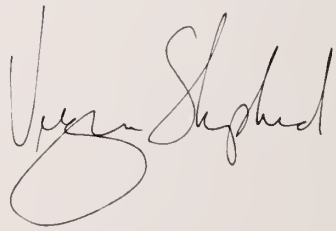
And, we are rattled. Nearly every hunting organization is defending itself against vicious slander. We are called "murderers," "slob hunters" and selfish killers concerned only with the production of "surplus" game animals. But, still we keep resurrecting the same old worn-out battle cry: "Get rid of the poachers!" "Be ethical in the field!" "Treat landowners with respect!" Open that 1928 magazine back up and you'll read the same exhorations. The truth is, poachers will always be with us. There will always be those who give our sport a bad name, no matter how much education or enforcement goes on. It is time to move into the 21st century with our eyes open if we want to save our sport.

For 65 years or better we learned to believe in biologists. If they pronounced an extended season biologically sound, then it was good. If they told us to hunt only bucks, then bagging a doe was a crime. For two or three generations we looked to biologists to establish our code of conduct, and define good or bad behavior in the field. This served our wildlife well, but neglected our relationship to *Homo sapiens*. Biologists, you see, are not interested in the morality of our actions. They are objective observers, giving us information on which to make our own decisions. Thus, they cannot guide us gracefully and intelligently into the 21st century, into a world where we can no longer walk all day without trespassing or shoot in our own backyards without fear of annoying a neighbor. So, when we find ourselves tangled up in ethical conflicts that have nothing to do with biology, we grope back into our past, dusting off old rules of right and wrong that worked well (or not so well) in a different time and a different place.

Perhaps we should turn inward instead in order to safeguard our sport in a world so utterly changed from the one we found so congenial 100 years ago. Perhaps by touching once more that solid ground of the *hunting experience*, that essence of our sport which stands unchanged by technological advances, bag limits, or the length of seasons, we may be able to see our path more clearly and judge ourselves, our practices and our privileges, more honestly.

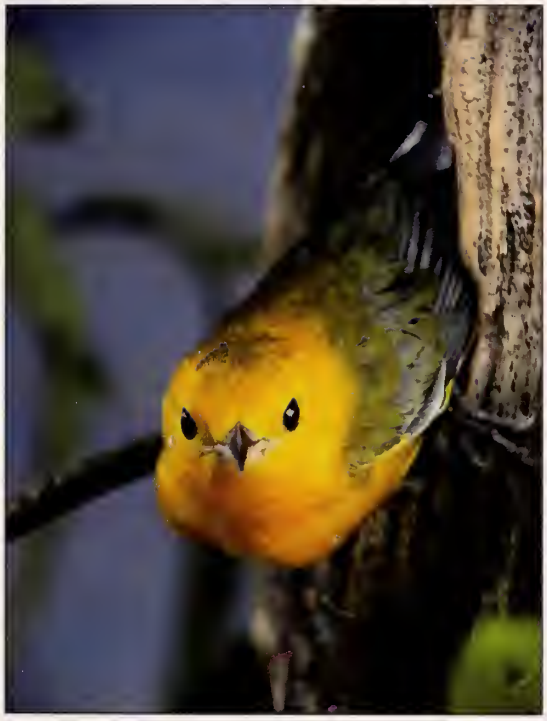
Ultimately, however, we must begin all over again. We must reclaim that energy and passion we abandoned and line up on the front once more with *new* ideas, with *bold* ideas, and without for once, worrying about offending anyone.

No doubt the Rev. Noel Allen is grinning wickedly from his grave right now, but never mind. We have bigger cats to worry about these days than those slinking quietly through the woods.



Find out what largemouth bass fishing in Virginia's tidal rivers is all about—beginning on page 20; photo by F. Eugene Hester.

VIRGINIA WILDLIFE



Cover: Traveling up from the neotropics in the spring, the prothonotary warbler *(Protonotaria citrea)* nests in Virginia, and is most commonly found in our coastal areas from April through October; photo by Rob and Melissa Simpson. For more colorful and easy-to-find birds in Virginia this spring, turn to page 4.

Back Cover: Angler with largemouth bass; photo by Soc Clay.

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Dedicated to the Conservation of Virginia's Wildlife and Natural Resources

VOLUME 54 NUMBER 5

The Birds of May

Getting started in birding can be intimidating, particularly when the woods are full of countless songs and colorful birds. For all you fledgling birders, here's a sample of birds to look for this spring.

by Spike Knuth

Birdwatching can be intimidating to the beginning birder. There's a little more to it than grabbing binoculars, pen, pad, a field guide, and plunging into woods and fields. Those pretty colored illustrations in the guide book are not always the same when viewed in the shadows of the thickets or looking at dark silhouettes against the sky. The bird books themselves can be overwhelming because of the numbers and similarities of like species, such as sparrows, warblers and sandpipers.

As a beginner, a person needs to be resolved to the fact that it is going to take time. Actually, most birds are identifiable without having to see their colors perfectly. Over time and through experience, a budding birder will begin to recognize habits, silhouettes, flight characteristics and common haunts. He or she will learn to look for specific field marks, such as eye rings, wing bars, eye stripes, streaks or spots, and will go through a sort of process of elimination in some cases to properly identify a bird. Later, calls and songs will be as-

sociated with individual birds, letting you know that they are around so you can look for them.

One of the tools for any accomplishment is to break a job into smaller parts, so that a person can have small successes from day to day until the big job is completed. This strategy also can be used in learning to identify birds. The idea is to pick an assortment of birds that are fairly common, concentrating on learning more about them by studying various books you might have, and then going to those places where you are apt to see them.

Birds seem to migrate to and through Virginia in shifts. Certain species come through in March, others in April. May usually brings us the songbirds that have been wintering in the tropical forests of Central and South America. May is also the time when foliage in Virginia begins to grow lush and dense. This may make it even more difficult to actually see certain species, so knowing where to look, what to look for and what to listen for becomes even more important.

Following is a selection of birds that are commonly seen in Virginia during May. Try to learn the following things about them: (1) What is their favored habitat—where do they live? (2) What are some of their unusual habits or characteristics—what do they do? (3) What are their prominent identifying field marks? (4) What are their calls and songs? How do they differ? (for example, the "jay-jay" of the blue jay is a call, not a song).

Birding can be picked up at any age. Why not give this lifelong activity a try this spring? ***Above****: American robin chick; photo by Rob and Melissa Simpson.* ***Top: Red-eyed vireo*** *watercolor by Spike Knuth.*

Red-eyed Vireo
(Vireo olivaceus)

This little bird is more apt to be heard than seen, because it spends its time in the upper canopy of deciduous forests as it moves about slowly in search of insects, especially caterpillars. The male sings incessantly throughout the day, long after the other birds have quit. Its warbling song ends with either an upward or downward inflection. It is often described as saying "Hear me—over here; See me!" If you hear a warbling bird high in the canopy during the summer, its a good bet that its a red-eyed vireo. It is olive-green above, white with yellowish sides below, and sports a soft gray cap edged with black over a white stripe above its red eye.

Eastern Kingbird
(Tyrannus tyrannus)

This member of the flycatcher family is charcoal above with a black head, and white below with a dark tail edged in white. Look for these birds mainly in open fields with low-growing brush, although it is not unusual to find them at the tops of pines or large trees in park-like terrain. They like to sit at the very top of trees, shrubs, posts or wildflowers. A typical site would be a kingbird sitting atop a mullein spire in a field. Kingbirds feed mainly on a variety of flying insects including bees, which gave rise to the name "bee martin." Flying out and up from their lookout perch, they feed on the insects that fly by, while uttering a series of chattering, raspy notes repeated a number of times.

Eastern Wood-Pewee
(Contopus virens)

This is another flycatcher, and another bird that is more often heard than seen. You probably hear it everyday, but don't realize it! Its call is described as "pee-du-wee-eeee," the last portion being drawn out with a rising inflection, often followed by a short, descending "wee-eee." It's about six inches long with dark, olive upper parts, underparts of olive-gray to yellowish-white, and whitish wing bars. These birds move about quickly and quietly as they feed on insects in mature forests, orchards and open groves, especially near water. They may suddenly appear on exposed, dead branches at mid-level of the forest, which gives rise to the name "dead limb bird."

Gray Catbird
(Dumetella carolinensis)

One neat thing about the catbird is that you don't have to find it, it will find you! Normally it sticks to the shadows of the thickets, but like a cat, it's curious and will come out of hiding to investigate any intrusions into its territory. Catbirds are slate gray with black caps and tomato-red blotches on their under-tail coverts. It is named for its cat-like "meow" which has an "ay" sound to it, often accompanied by a "tschek, tschek" scolding call. Its song falls short of those of its two cousins, the mockingbird and the brown thrasher. One of its habits is to flick its tail nervously. One oddity about the catbird's call or song is that it may sound as if it is many yards away when in reality it may come from a the shrub just a few feet away!

Marsh Wren
(Cistothorus palustris)

The marsh wren is so named because it resides in freshwater and

brackish water marshlands. This little bundle of energy will sing its heart out from atop a cattail or swaying reed, or while crawling through the cattails and rushes. When disturbed, it sinks deep into the marsh vegetation and scolds and chatters. Its song consists of many raspy, scratchy and gurgling notes. It's about five inches long with brownish upper parts, buffy brown underparts and a distinctive black back streaked with dull white. This sets it apart from other wrens. It also has a distinctive dark cap with a white eye stripe. During courtship and breeding, marsh wrens will sing at night, filling the marsh with noisy song.

Spotted Sandpiper
(Actitis macularia)

Not the most numerous, but certainly a common bird, is the spotted sandpiper. They inhabit almost any type of freshwater habitat from small ponds and streams to large river banks, the shores of large reservoirs, mountain valley streams and even wet meadows. It seems as if every small lake or pond has a pair of breeding "teetertails" each spring. One of its habits is to constantly bob its tail up and down. It is olive-colored on top with a white, spotted breast—the only sandpiper that is spotted, although it loses this feature in fall. It can be confused with the water thrush, which is really a warbler, that also bobs its tail, but the water thrush has a streaked breast, is more brownish and lives in swampy or forested habitats. When flushed from shore, the spotted sandpiper will fly in a semicircle back to shore with shallow, fluttery wing beats, uttering its distinctive "peet-weet, peet-weet" call. It shows a white stripe that runs the length of it outstretched wing.

Common Yellowthroat
(Geothlypis trichas)

To a marshland wanderer, the "witchety-wichety" song of the yellowthroat is quite common. It is yet another bird that is common, but more apt to be heard than seen. It is an active, almost wren-like warbler. Look for them in wet, brushy meadows, at swamp edges, along ponds and streams with willow and alder, in cattail and rush marshes or in blackberry thickets in hedgerows near water. They spend a lot of time on or near the ground and are often called "ground warblers" because of it. Upset when intruded upon, they will scold with harsh, raspy notes. The male is olive above, with a bright yellow throat, white belly and a distinctive black mask, edged in white.

Yellow-billed Cuckoo
(Coccyzus americanus)

To some Virginians, this bird is known as the "rain crow." Its "song" is a hollow-sounding clucking—almost squirrel-like—affair, starting

Opposite page**: (clockwise from bottom left)* ***Marsh wrens *nest in wetlands.* ***Gray catbirds*** *are easy to spot in around brushy habitats in your own backyard.* ***Eastern kingbirds*** *like to sit at the very top of trees, fenceposts, or wildflowers in fields. If you find tent caterpillars in the woods, look around for* ***yellow-billed cuckoos****. Photos by Rob and Melissa Simpson.* ***This page**: (above, left to right)* ***Spotted sandpiper*** *in breeding plumage; immature* ***Eastern wood-pewee****; photos by Rob Simpson. Birdwatching requires patience and perseverance; photo by Maslowski.*

fast, then becoming abruptly slower and longer as it runs down the scale and breaks up. Cuckoos are secretive and spend their time deep in the heavy foliage, so they usually don't show up until leaf development is well along. They move about slowly and deliberately as they feed mainly on caterpillars. Look for them in areas infested by tent caterpillars in early summer, and fall webworms late in the year. You might see them in flight only when they quickly move from one tree to another or from one forested area to another. They appear dove-like in flight, except they fly straight and direct with their long tails being very noticeable. They are basically olive-brown above, white below with rufous-colored wings, and large white spots on the black underside of their tails.

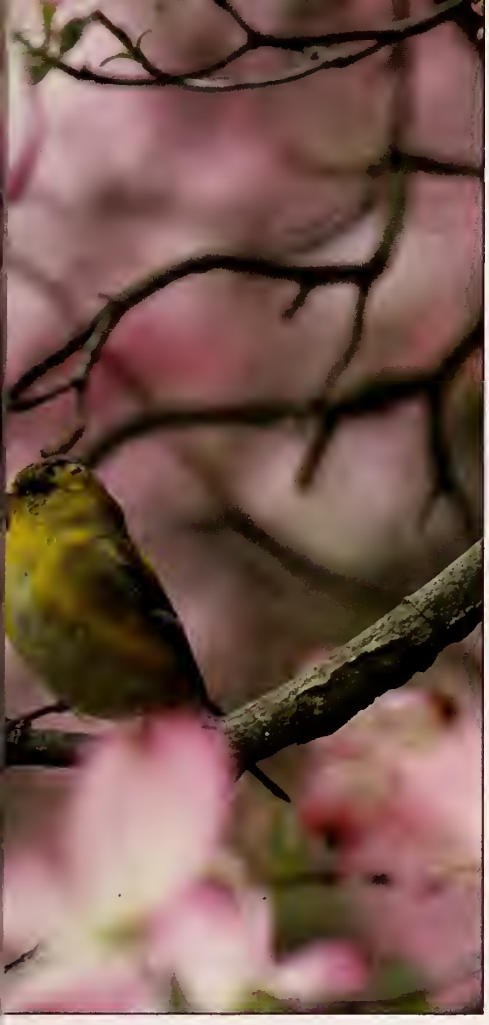
Indigo Bunting
(Passerina cyanea)

Another common bird of open lands interspersed with hedgerows and woodlands is the indigo bunting. They sing a song best described as "sweet-sweet, chew-

*In the spring, the male **American goldfinch (top right)** is not yet sporting the pronounced black cap and wings he will have by summer; photo by Maslowski. The **chipping sparrow (above)** is a common bird of parks and residential areas. They commonly nest in spruce, pines, or shrubs in subdivisions; photo by Rob Simpson.*

May Birds Checklist

Species	Date/Time	Where Seen/ Habitat Type
Eastern kingbird		
Red-eyed vireo		
Eastern wood-pewee		
Gray catbird		
Marsh wren		
Spotted sandpiper		
Common yellowthroat		
Yellow-billed cuckoo		
Indigo bunting		
Chipping sparrow		
Chestnut-sided warbler		
Palm warbler		
Ovenbird		
Yellow warbler		
Prothonotary warbler		
Goldfinch		



Yellow warblers (female pictured top) are often found in willow and alder trees along swamp edges; photo by Rob Simpson. Indigo buntings (above) are common birds of open fields and hedgerows; photo by Maslowski. Below: Ovenbird by Spike Knuth.

chew," usually from the top of a small tree, post, wire or tall flower such as mullein or thistle. The male actually may look black, but if the sun hits him right, he'll reflect the beautiful blues and greenish-blues he's named for. The female is a sparrow-like brownish with little or faint breast streaks. Look for them in almost any field or meadow with brush or trees nearby.

Chipping Sparrow
(Spizella passerina)

The smallest sparrow is a common bird of the parks and residential areas. You'll see it feeding on weed seeds on your front lawn or along driveways and road edges. They commonly nest in spruce, pines or shrubs in subdivisions. The chipping sparrow has a grayish breast and a chestnut-colored cap edged by a white stripe with a black stripe through the eye. Their song is a rapid "chipping."

Chestnut-sided Warbler
(Dendroica pensylvanica)

We are hearing that clear-cutting is bad for our neotropical birds, yet if you want to see a chestnut-sided warbler, go find a two or three-year-old clearcut in a National Forest, a VDGIF Wildlife Management Area or on private land. This bright-colored warbler is drawn to slash areas that are growing up in small trees and shrubs. Its song is described as "plea-please-pleased-to-meetcha." It has a bright yellow cap, chestnut sides, pale wing bars and streaked, lemon green back.

Palm Warbler
(Dendroica palmarum)

The palm warbler, next to the yellow-rumped (myrtle) warbler, is probably the most common warbler to migrate through Virginia. You are more apt to be able to see and identify one because they spend time closer to the ground in shrubs and smaller trees. It is olive-brown above, with yellowish to whitish undersides and a chestnut-colored cap. It shows two distinctive white spots on the outer, underside edges of its tail. Its call is a weak, repetitive "zhee-zhee-zhee-zhee." A good identifying habit is the fact that it constantly bobs its tail.

Ovenbird
(Seiurus aurocapillus)

The ovenbird is a ground-dwelling warbler found mainly in deciduous woodlands. It can be confused with the thrushes because its breast is streaked with black. It has an olive-brown back and an orange crown edged in black. If you do see an ovenbird, it will probably be walking on the ground amid the mayapples and trilliums, its pink legs and feet being noticeable. This is another of those birds that you are more apt to hear. Its song is an energetic "teacher-Teacher-TEACHER," growing in volume on the end.

Yellow Warbler
(Dendroica petechia)

The yellow warbler is another warbler of the marshes, swamp edges, wet meadows or streamside thickets. It is fond of willow and alder, much like the yellowthroat. It is mostly all yellow, with only a light-olive back and wings. The male has reddish-brown streaks on its breast. Its song is a "weet-weet-weet-weet-tsee-tsee" offered very rapidly. Watch for the little female picking cattail fuzz in May which she'll use for her nest.

Prothonotary Warbler
(Protonotaria citrea)

This is another warbler that shows a lot of yellow. Its head and breast are mantled in deep yellow, with an olive-colored back and bluish wings and tail. Its call is a single pitch "zweet-zweet-zweet-zweet-zweet." This warbler is found mainly in the swamps of Virginia's tidal rivers, lakes and streams. They nest in the cavities of rotting trees usually along the water's edge, and that's a good place to look for them.

American goldfinch
(Carduelis tristis)

The American goldfinch is known to many as the "wild canary." It is also called "salad bird" or "thistle bird" because of its liking for the tiny seeds of various garden plants and thistle.

Look for large flocks in late-April or early May in the tops of elms and other big trees that flower at that time. Their seemingly endless series of trills and twitterings creates quite a clamor as they devour fresh tree flowers.

Their flight style is roller coaster-like and they utter a call described as "per-chickory," which is repeated as they fly. Goldfinches are late nesters, often waiting until early August to raise their young.

Resources

Field guides:

A Guide to Field Identification: Birds of North America, by Robbins, Bruun, Zim, Singer. Golden Press.

An Audubon Handbook: How to Identify Birds. McGraw-Hill.

An Audubon Handbook: Eastern Birds. McGraw-Hill.

A Field Guide to the Birds East of the Rockies, by Roger Tory Peterson. Houghton-Mifflin.

Organizations:

The National Audubon Society, P.O. Box 51000, Boulder, Co 80321-1000. Membership dues are $30/year and include a subscription to their color magazine and a monthly newsletter from your local Audubon chapter.

The Virginia Society of Ornithology, 5209 Rainbow Forest Drive, Lynchburg, VA 24502. Membership dues are $10/year which includes a quarterly newsletter with announcements of field trips and breeding bird working forays, and other activities.

*The winter plumage of the **palm warbler (top)** will give way to new spring feathers which include a distinctive rusty cap. **Left: Chestnut-sided warblers** (male and female pictured) are found in two-to three-year-old clearcuts. **Right:** The female common yellowthroat does not sport the distinctive black mask of the male; photos by Rob and Melissa Simpson.*

Winter Comfort
by
Bob Henley

Winter Comfort

by Bob Henley

A limited edition of 950 . . .
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We are proud to offer wildlife artist Bob Henley's limited edition print of two red foxes in snow to our *Virginia Wildlife* subscribers. Bob Henley's breathtaking work has been featured in the February and July 91 issues of *Virginia Wildlife*, and for weeks after those magazines appeared, people called us inquiring about Bob Henley prints for sale. We realized that our subscribers weren't content to have a Bob Henley work in their magazines, they wanted one for their walls! And, lo and behold! Bob has allowed us to make a special offer to our subscribers. First, you can have your very own 13"x19 1/2" *Winter Comfort* print for $35 when you buy two one-year subscriptions to *Virginia, Wildlife.* That's a savings of $10 off the regular price of *Winter Comfort.*

Of course, if you've already given everyone you know (including yourself) a subscription to *Virginia Wildlife*, you can still purchase *Winter Comfort* for $45. Any way you look at it, we hope you're as happy as we are about the opportunity to own a Bob Henley limited edition print for under $50. Orders yours today!

Use the gray card in this magazine to order your prints and subscriptions, or send in your list of gift subscriptions and the number of prints ordered with your check made out to: *Treasurer of Virginia*, to: *Virginia Wildlife*, P.O. Box 11104, Richmond, VA 23230-1104.

Freshwater Game Fish Poster

The Virginia Department of Game and Inland Fisheries has produced a full-color 21" X 36" poster of 23 freshwater game fish in Virginia. This identification poster of fish includes largemouth bass, trout, crappie, catfish, perch and pickerel, and can be purchased by sending a check for $8 to:
Fish Poster, Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104. Please make check payable to: Treasurer of Virginia. ☐

Mistakes That Fly

Do you want to come home with a gobbler this season? There's still time left if you don't make any mistakes.

by Gerald Almy

Calling in and successfully harvesting a spring gobbler is one of the most difficult challenges in the world of hunting. It's not uncommon to hear of hunters trekking into the woods five or 10 seasons straight before bagging their first turkey.

If you are in this breaking-in phase and have yet to bag a gobbler, don't give up. Instead, realize that once you call in and take that first bird, all the years of frustration, near-sleepless nights and pre-dawn risings will seem worthwhile. There is no experience—except perhaps calling in a trophy buck—that can match calling in a mature tom in spring and taking him with a shotgun or bow. Once you have harvested a bird, somehow the problems that always seemed to interfere tend to just slip away. You'll find confidence, and to a certain degree, consistency. No, you

in Your Face

Moving in too close to a tom is one of many mistakes hunters will make in the woods this spring. Try to keep you distance. ***Opposite:*** *wild turkey; photo by Carol Herndon.* ***Inset:*** *Photo by Lloyd B. Hill.*

won't bag a tom every day in the woods, nor even every season. But at least you'll do better than once every five or 10 years!

To succeed in turkey hunting requires skill, but sometimes skill can really boil down to *not making mistakes.* To help novices or those who have had only limited success with spring toms, here are 12 of the most common mistakes you may be tempted to make this spring in the Virginia woods and how you can avoid them:

1) *Not scouting sufficiently.* Some people think that since male turkeys are vocal in spring, all you have to do is go out once the season opens and cover ground until you hear one, then try to call him in. That slipshod approach sometimes works—if you're an unusually lucky person. Normally, though, it's the hunter who gets out well before the season and does plenty of scouting and locating birds who scores.

Scouting should not be done too early. Wait till flock breakup occurs in late winter and early spring and birds are starting to establish their breeding territory. Drive dirt roads in backwoods areas and stop every 300-500 yards to call. Listen for birds on ridges and logging trails in prime areas. Use locator calls such as the owl or crow, and even a hen call. But avoid calling the gobbler all the way in. You simply want to locate turkeys, not educate them and make them call-shy.

2) *Driving too close to the hunting area.* In the old timers' hunting tales, they used to drive up right to the hunting grounds and slam the car door shut to get the toms gobbling. That still happens on occasion in lightly-pressured areas with unwary toms. But, in most parts of Virginia, turkeys are wary and hunted heavily. Any sound of a car driving up, stopping and doors opening and closing is likely to make them alert and suspicious, or actually scare them into another area. Park at least a quarter mile from the area where you think gobblers might be and then walk in. Similarly, when scouting, stop the car and walk a bit before calling to try to locate birds. At the very least, stop the vehicle and wait a while before you call.

3) *Approaching too close to a gobbler.* As my friend Jim Clay, president of Perfection Turkey Calls, says: "You can usually call a bird a little further, but if you take one step too close and that gobbler sees you or senses something is wrong, the game is all over before it even starts."

Deciding just how close you can approach a tom is one of the most difficult things in turkey hunting. If you stay out too far, your chances are

poorer for calling the bird in. But one step too close is one too many. Because of this, it's best to err on the side of staying too far away. Often in areas with thick cover or lots of rolling knolls, or late in the year when vegetation is thick, you can approach within 80-100 yards. During early season or in more open terrain you may have to try to call the gobbler 200 yards or more to avoid any chance of being seen sneaking in too close. Gobblers have super-sharp eyesight and if they detect the slightest suspicious movement, they will not come to a call.

4) *Calling too often.* I've hunted with experts who could call almost nonstop and still bring birds in, but for the average hunter, it's a mistake to call this much. Chances of sounding unnatural or making bad calls increase the more you sound off. And more often than not, you'll simply make the gobbler feel that if you're *that* eager of a hen, he doesn't need to come rushing in and can simply wait it out until you come to him.

Calling too frequently is particularly bad when the bird is still on the roost. Call only a couple of times when the tom is in a tree, then wait until he flies down before giving more calls. If he's coming towards you at that point, there's really no need to call anymore. The gobbler knows where you are. Only if he starts to veer away or hangs up should you call more.

5) *Hiding too well.* A mistake novices often make is to get back in brush or a blowdown where they feel like they'll be well hidden from the tom. This also makes it harder for them to see the gobbler, though, unless he comes right in from the one direction they're looking in.

Instead of hunkering back in brush, simply wear camouflage to avoid the bird seeing you and sit with your back against a tree trunk at least as wide as your body. This will hide your silhouette. There's no need to build blinds or get back in a pile of brush. Just don't move when the tom is approaching.

6) *Wearing red, white or blue clothing.* This is a potentially dangerous safety mistake. It shouldn't be, because hunters should always identify their target carefully before pulling the trigger. But sometimes poorly educated or overanxious hunters have been known to shoot when they saw red, white or blue, which are the colors a tom's head often takes on when he is sexually excited and coming in to a call. Don't wear any of these colors. Instead, dress in total camouflage and wear some blaze orange when walking into or out of the woods or changing positions. Also, consider tying a blazer orange sash around the tree you're sitting under.

7) *Not being ready when a bird comes in.* More than once I've made this mistake and it's one of the most humiliating and frustrating of all goofs. To go through all the motions of finding a tom, setting up properly, calling him in and then not being ready with the gun up, aimed and in the firing position when he appears is one of the most maddening mistakes you can make.

When you hear a tom, prop your knees up and rest the gun barrel across your left knee, (if you're right handed). Sit so that you are facing slightly to the right of where you expect the tom to come. This way you can most easily move to the left or right if the bird isn't exactly where you figured it would be. When a bird starts to approach within range, lean down into the gun and have it pointing in the direction the tom is coming from, so that only a slight adjustment will be required before you shoot. Make that last final movement when the bird's head goes behind a tree.

8) *Using the wrong gun.* A 20-gauge will kill turkeys at close ranges, but 12 or 10 gauges are better. They should have a full or extra-full choke, relatively short barrels for maneuvering in the woods and a sling for carrying in or out of the woods. Camouflaging or at least a flat finish is required and a double bead or some other aiming system is helpful.

9) *Using the wrong load, not patterning the gun.* Turkeys are such big birds that some people get the idea they'll use large shot and aim for the body, but that seldom results in a clean kill and far too often wounds birds that die later unretrieved. The best shot sizes are 4, 5 and 6, and the only place to aim is the head and neck area. Copper-plated magnum loads that hold as much shot as possible are best.

Several companies make quality turkey loads, but some brands and sizes shoot better in one gun than another, so it's always wise to experiment to see which performs best

*Neglecting to pattern your gun or using the wrong load can result in a crippled bird. The best shot sizes are 4,5, and 6 (**right**); photo by Gerald Almy. **Opposite page**: Don't hide **too** well from your bird. Make sure you can see clearly in all directions (**top**); photo by Gerald Almy. **Below**: Always wear camouflage and avoid red, white or blue clothing; photo by Lloyd B. Hill.*

with your shotgun. This will also tell you whether your gun is shooting exactly where you aim or slightly off to the left or right. It will also reveal how far you can shoot and still consistently place multiple pellets in the vital head and neck zone of a turkey. For most 12-gauge guns, this will be about 40 yards. For 3 and 1/2-inch chambered 12 gauges or 10's, sometimes 45 or 50 yards will be the outer limit.

10) *Shooting through brush.* If you've called a turkey into range, don't blow your chance by trying to shoot through brush. Even a thin screen of saplings or branches in the way can disrupt a pattern and result in a miss or wounded bird that flies away unrecovered. Wait a few more minutes and chances are the tom will move out of the thickets and into a clearer spot where you can harvest it cleanly.

11) *Shooting at sound or movement. Never* shoot unless you are 100 percent sure you are aiming at a legal turkey. Shooting at sound or movement or a flash of color that you think might be a tom is a sure way to involve yourself in an accident that will haunt you the rest of your life. When in doubt, hold fire.

12) *Giving up too easily.* If a gobbler doesn't come right into your call, don't give up. Instead, switch to a different call. If you've been using a diaphragm, switch to a box or slate or push-pen type. If you've been yelping, try cutting. If these changes don't work, try moving. You can move laterally or actually walk away from the bird, making him think you're leaving. Often this is enough to make a reluctant tom change his mind and come in to investigate.

Finally, always be prepared for birds that want to sneak in quietly. Not all toms will gobble on the way in. Be alert and ready for the silent ones that slip in like ghosts.

You have a few weeks of spring gobbler season left this year. Make them count—hunt wisely and safely. And make no mistakes! □

Gerald Almy is a hunting and fishing editor on the staff of Sports Afield. *He lives in Shenandoah County.*

Rappahannock/Rapidan River Float Trips

Both the Rapidan and Rappahannock Rivers are full of float fishing and canoeing opportunities. With their abundant redbreast sunfish and smallmouth bass populations, knowledgeable freshwater fishermen recognize these rivers as two of the most productive streams in the Virginia piedmont. Plus, the numerous riffles, rapids and ledges of these waters provide thrills for the canoeists with intermediate or better canoeing skills.

If you are floating one of the longer stretches of the Rappahannock or Rapidan which requires overnight camping, come prepared. There are no developed campgrounds along the river. Unless you have made prior arrangement with a private landowner, it is suggested that you confine your streamside activities to those public lands owned by the City of Fredericksburg or the Virginia Department of Game and Inland Fisheries (VDGIF). Most of the City's property consists of narrow strips of land 100 to 300 feet wide along both banks of the river between Deep Run and Mott's Run on the Rappahannock, and Ely's Ford and the confluence with the Rappahannock on the Rapidan. VDGIF's C. F. Phelps Wildlife Management Area (WMA) borders the Rappahannock for 0.5 mile in Culpeper County and 5.25 miles in Fauquier County.

Please respect the rights of others by leaving these areas free of litter and fire rings. Be sure to carry out everything you carry in.

The uppermost access to the Rappahannock is at the old Route 29 bridge in Remington or at the VDGIF boating access site on Route 620 at Kelly's Ford.

Downstream, the next public access is at Mott's Run on Route 618 west of Fredericksburg. The 4.5-mile stretch from Remington to Kelly's Ford can be floated several times in a single day. However, it is 25 miles from Kelly's Ford to Mott's Run, and with no intermediate access points, it usually requires a minimum of two days to paddle.

Three miles downriver from Remington, instream ledges and rock outcrops signal the approach of Kelly's Ford rapids. About 1800 feet of continuous Class II rock garden precedes the first real drop, a Class III ledge, the most significant rapid in this section. This drop precedes about a mile of whitewater in which the gradient is some 30 feet per mile. The right bank along this stretch of whitewater is bounded by a portion VDGIF's 4,500-acre C. F. Phelps WMA which provides ideal opportunities for streamside picnicking.

Below Kelly's Ford bridge, the river resumes a more leisurely pace. Once this bridge is behind you, there is no more public land access until you reach Mott's Run Landing, some 25 miles downstream.

Beginning at Marsh Run, just below Kelly's Ford bridge, the Phelps WMA borders the north side of the river for approximately five miles. Here the river consists primarily of long, flat pools, with only an occasional riffle as it drops at a rate of about two or three feet a mile through gently rolling timber and farmland. The character of the river changes noticeably as the surrounding terrain becomes steeper and heavily wooded. One of the most delightful river environments you could ask for, the landscape is dominated by steep, rocky bluffs and beautiful bottomland hardwood forests. Paddling by islands and through riffles, the average drop over this stretch is about seven feet per mile. In the area of the confluence of the Rapidan, the average gradient is 17 feet per mile and riffles and rapids become longer, more frequent and more difficult. Once past the confluence, the gradient returns to a more sedate five feet per mile.

All but doubled in size by the confluence of the Rapidan, the Rappahannock meanders through a wide, deep valley. A majority of Class II riffles found in this stretch are the result of foundation rubble of the numerous dams which once harnessed this beautiful free-flowing river.

If your choice of rivers is the Rapidan, you will find its most scenic canoeing stretch between Germanna Ford and Mott's Run. This 23-mile stretch of the Rapidan is accessible in two places: Germanna Ford on Route 3 and Ely's Ford (seven miles downriver from Germanna Ford) on Route 610. Off-road parking is available at both sites; however, boat access is primitive. Between Germanna and Ely's Ford, the river meanders lazily through piedmont farms and woodlands, dropping an average of only three feet a mile. Near the mouth of Flat Run , the river enters a more remote, heavily wooded valley and few signs of civilization intrude on the riverscape of the next 10 miles.

Ely's Ford to Mott's Run is 16 miles of the most delightful section of the piedmont Rapidan for canoeists and fishermen. Just below Ely's Ford, the gradient begins to increase and the paddler will start to encounter occasional Class II ledges and rock gardens. The river drops 12 to 15 feet in the last mile above its confluence with the Rappahannock. The most significant whitewater on this stretch is a long Class II rock garden that begins about a half mile upstream from, and continues through, the confluence. Take-out is at VDGIF boat slide at Mott's Run, approximately eight miles further downstream.

Excerpted from "Rivers of Opportunity" by John Heerwald, Virginia Wildlife, *October 1981.*

Float Trips

All sections provide excellent angling opportunity for smallmouth bass, redbreast sunfish and bluegill. Additionally, upper sections have good populations of fallfish and rock bass while lower portions contain channel catfish and largemouth bass.

Don't forget to add "fishing time" to paddle time for trip estimates.

Rappahannock River

Remington to Kelly's Ford:

Paddle time: 2 hours. Distance: 4 1/2 miles. Good whitewater (up to class III on lower half of trip. Popular trip due to the proximity of primary highways and suburbs and a relatively short float distance.

Kelly's Ford to Mott's Run:

Paddle time: 10-14 hours. Distance: 25 miles. A beautiful and secluded float but a long one! An overnight camping stop is usually required, especially if any time is spent fishing.

Motts Run to Embrey Dam:

Not recommended due to problems with dam portage and diversion canals.

Embrey Dam to City Dock:

Paddle time: 1 hour. Distance: 2 miles. Access river at Rappahannock Outdoor Educational Center (below Embrey). This is the fall line, and the upper half of this short float has many rapids. River character changes drastically at the Route 1 Bridge, and the remainder of the trip is through slow tidewater. Largemouth bass, black crappie, and channel catfish angling is particularly good on this stretch.

Rapidan River

Raccoon Ford to Germanna Ford:

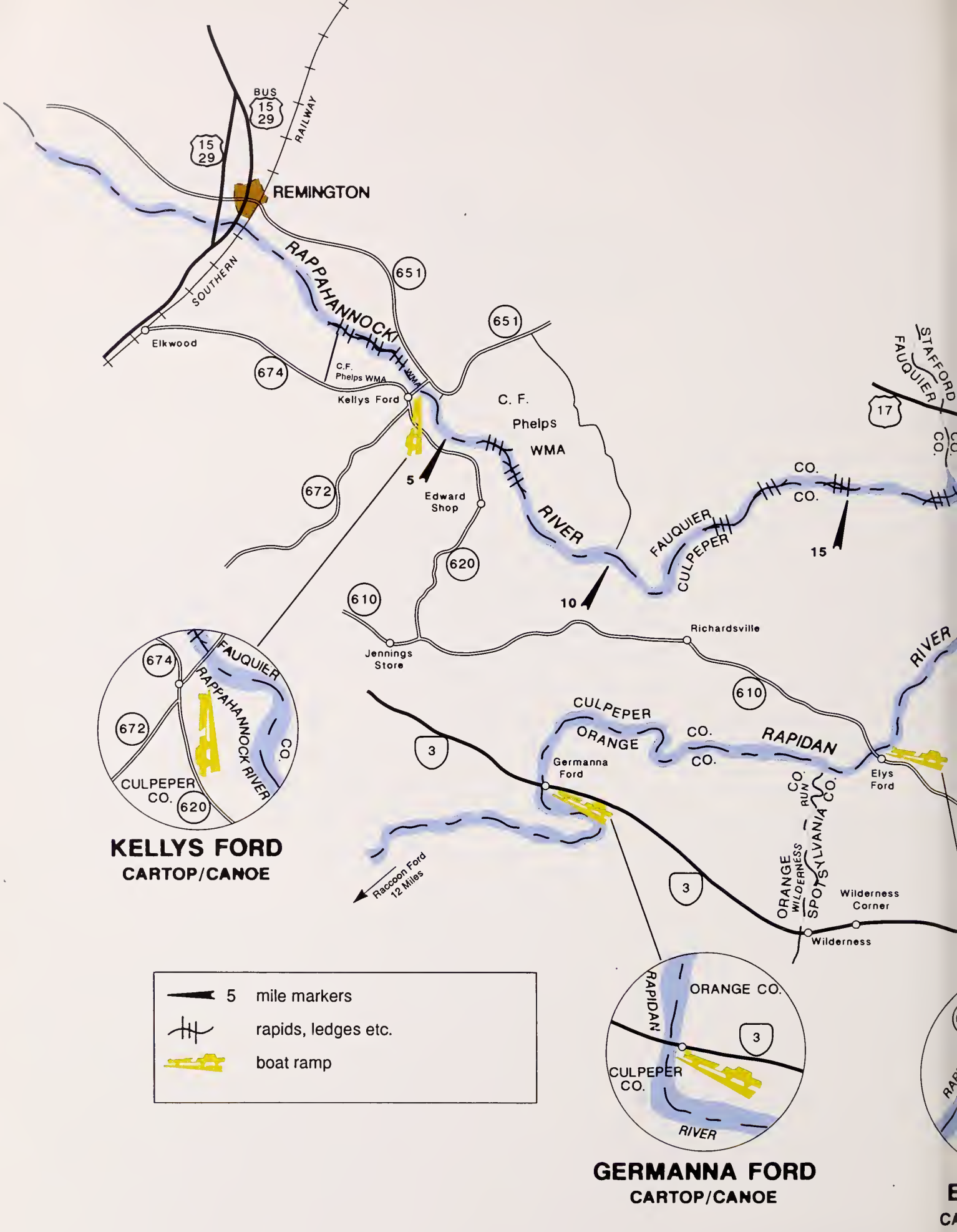
Paddle time: 7-9 hours. Distance: 12 miles. Access the river via Route 611 (off Rt. 522). Currently primitive access and no off-road parking; however, facilities should be developed in the near future.

Germanna Ford to Ely's Ford:

Paddle time: 3-5 hours. Distance: 7 miles. Many flat stretches—especially on the upper end. The channel becomes quite braided downstream. A popular "day float."

Ely's Ford to Motts Run:

Paddle time 10-12 hours. Distance: 16 miles. An especially beautiful and remote stretch. Many rock gardens and rapids on the Rapidan before its confluence with the Rappahannock. Not as popular a float due to trip length.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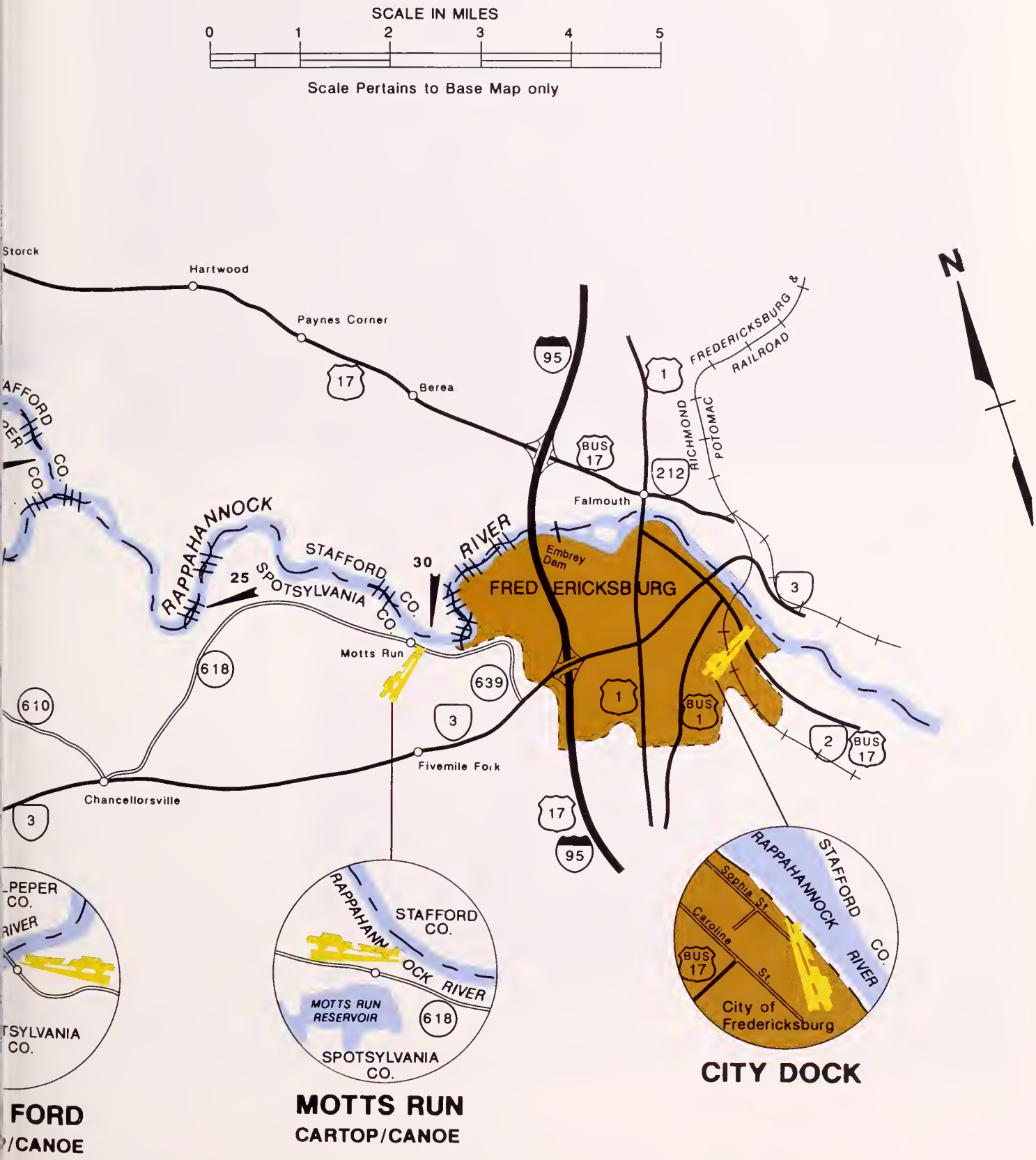
CARTOP/CANOE

Boating Access to the Rappahannock And Rapidan Rivers



Chickahominy River Bass

by Gerald Almy

Take a trip to tidewater Virginia and launch your boat into the slow tidal waters of the Chickahominy. The largemouths are waiting.

We barreled through the night sipping coffee and talking bass as the pine-lined ribbon of asphalt shone in the beams of the truck headlights. When we pulled into Hideaway Marina, the first hint of gray dawn illuminated the dark Chickahominy River. Our breath exhaled in white puffs as we readied our gear. Silver droplets of dew cloaked the nearby lawns

The tide was falling. We knew we had to move fast to enjoy the best bass fishing. Backing the truck down the ramp, Glenn Peacock slipped the Procraft into the tannin-stained waters as Pete Cissel cranked the big Evinrude into gear. The motor sputtered briefly, then purred in a smooth drone. In minutes we were off, slicing across the river in the blue bass boat as the sun crested the treeline in the east.

After a short run, Pete backed the boat off plane and we eased under power of electric motor toward Lobbs Creek. With any luck, bass would be waiting at the mouth of the feeder, slurping down shrimp, insects and baitfish being washed out of the tributary by the strong tidal pull.

Making a long cast out with a firetiger Model A Bomber crankbait, Glenn turned the spinning reel handle three times, then instinctively struck back as his rod bent toward the water.

Watching a two-pound bass leap across the surface made it hard to tie knots, but soon enough Pete and I had small crankbaits on ourselves

and tossed them towards the mouth of the feeder creek. A three-pounder slammed into my Rebel, and several casts later Pete was into a stout bass. By then Glenn had landed his fish, released it and was again battling another largemouth—a twin to his first.

Conditions were perfect and the bass seemed to be packed shoulder to shoulder into the small area where the shallow tributary dropped off into the deep Chickahominy River. Over the next hour we missed and lost many fish, but landed 40 bass, releasing all but a few. The fish ran from one and one-half to four pounds, averaging well over two pounds apiece. It was without question the most hectic start to a bass fishing day I had ever enjoyed.

As the tide switched and started coming in, action slowed. By changing tactics, though, and tossing grubs and plastic worms at the bases of cypress trees, we managed to add another couple dozen bass to the tally, with a total of 63 fish for the day. Two were in the five to six-pound class, the rest weighed one to four pounds.

That hectic spring fishing trip many years ago was my introduction to the tidewater bass fishing of the Chickahominy River in east-central Virginia. Since then, I've returned many times to fish this fertile, brackish-water river. And while not every foray has been as successful as that baptismal outing was, the angling has always been of a consistently high quality.

From Walker's Dam, where Chickahominy Lake ends, downstream to where it empties into the James River—roughly 20 miles—the Chickahominy River offers some of the best tidewater bass fishing in the country. Indeed, the river has become so famous for its largemouths that the Bass Masters Classic was held for three years in a row on the adjoining James, partly so that contestants could make the long run down and fish the Chickahominy.

Virginia is actually blessed with a number of outstanding tidewater bass waters. Some of the best rivers are the Rappahannock, Occoquan, Appomattox, James, Mattaponi, Pamunkey and York. But for quantities of fish and consistent action, it's hard to top the Chickahominy. Catches of several dozen bass a day are not uncommon during prime periods, and occasionally some exceptionally heavy fish are taken. The largest bass ever pulled from the Chickahominy weighed a whopping 12 pounds. Virtually every year 8-pounders are registered for citations from the river. Last year, 28 such bass were caught from the Chickahominy, more than any other water in the state except lakes Gaston, Anna, and Chesdin. And if this bounty of bass wasn't enough, healthy populations of crappies, yellow perch, striped bass, bluegill, catfish and white perch add variety to the day's catch.

A final lure of the Chickahominy is that it rarely gets muddy. The buffering effect of the lake and surrounding wetlands upstream filter out sediment, and even after heavy rains the river normally flows clear (though it's always stained brownish-black from tannins in the water).

In spite of these attractions, it's surprising how few people utilize the quality bass fisheries found in the Chickahominy and Virginia's other tidewater rivers. Perhaps it's because the state has so many good ponds and bass lakes such as Anna, Gaston and Kerr. Or perhaps it's just that most people aren't brought up to think of bass as a fish found in semi-salty water.

In actuality, this is prime habitat for largemouths and the bass rules as king in brackish portions of the state's rivers. There's an abundance of forage and very little competition from other fish for it, since this water is not salty enough for species such as bluefish, sea trout or channel bass. Cover is usually plentiful in the form of dock pilings, blowdowns, weed beds, duck blinds, creek mouths, bridge abutments, dropoffs and cypress trees. They provide ambush points where bass can lie in wait for unwary baitfish to swim or get pulled by the tide past them. The constant flow of the river current as well as the incoming and outgoing tides makes for a dynamic habitat that continually stirs up food and keeps oxygen well-circulated throughout the water.

*From Walker's Dam downstream to the James River, the Chickahominy River offers some of the best tidewater bass fishing in the country. The Strike King 38 special spinnerbait (**silhouetted opposite**; photo by Gerald Almy) is a must for the area. **Above**: photo by Gerald Almy. **Opposite**: photo by F. Eugene Hester.*

But as productive as tidewater rivers such as the Chickahominy are, they do require some special tactics. It's not like fishing a lake or even a freshwater river. Tides are of overwhelming importance. They are more significant, for example, than time of day. I've caught fish in good numbers on the Chickahominy at high noon in summer when the sun was beating down harshly—simply because the tide made feeding conditions perfect at that time.

The very best angling on the Chickahominy and similar tidewater rivers usually occurs during the last two hours of a falling tide and the first hour or so of the incoming tide. Fish can be

caught at other tidal stages, but these are the prime times to find bass in an aggressive, easy-to-catch mood. When the tide has dropped, it cuts down the space fish have to spread out in, concentrating them closer to the edge of the river channel, flats and feeder creeks where you have better access to them.

Because of the importance of tides, it's wise to consult charts in order to time your outing so you're on the water at the prime stages. If you have a fast boat and don't mind running, you can often move to follow the best tide, which hits different parts of the river at different times.

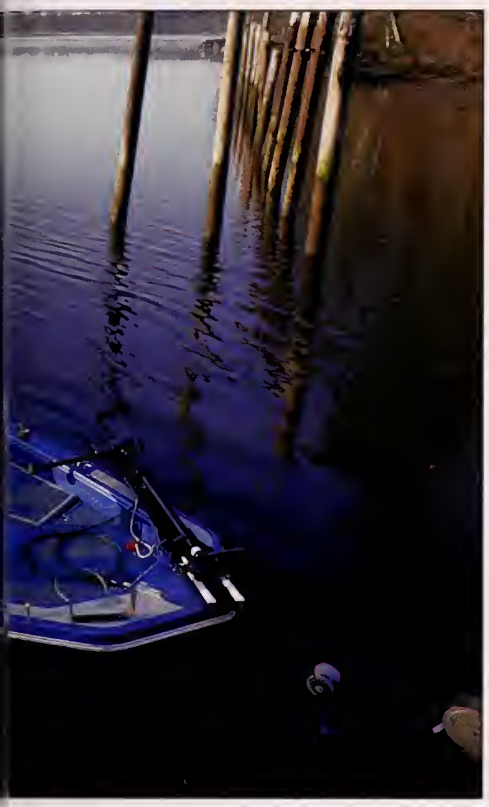
Woo Daves, a well known tidewater bass fisherman, says: "Your fishing pattern will hold as long as you move with the tide, whether it's coming in or going out. It can mean the difference between a brief flurry of action and a three-hour productive fishing period."

Whether you plan to follow the tide with a fast boat or simply time your trip to coincide with an optimum tide and fish one area thoroughly, a good map is a help. Alexandria Drafting Company (ADC) has produced a detailed James River fishing map (which includes the Chickahominy) which should be available at local bait and tackle shops. If it isn't, ask your favorite tackle shop to order the maps from ADC at 6440 General Green Way, Alexandria, VA 22312; phone: 1-800-ADC-MAPS. (You can order them directly, but you must order a minimum of three maps at $3.50 each to avoid a hefty shipping charge.)

If you have to fish on a high tide, some good areas to try are duck blinds, docks that extend into deep water, lily pads, flooded cypress trees, deep points, dropoffs near bends in the river channel and bridge abutments. Flipping is especially useful during high tides. The bass tend to hang tight to cover at these times and don't feed aggressively. By dropping a lure right on top of them, you're more likely to entice a strike. Top lures for this fishing include 1/4-1/2 ounce jigs dressed with pork rind, grubs, spinnerbaits and plastic worms. Weedless spoons such as the Johnson Silver Minnow fished in lily pads can also work at this time. Tip them with pork rind or a white or chartreuse plastic trailer.

During a low tide, probing creek mouths is often a hot tactic. If strikes don't come at the mouth, sometimes you can work right up into the tributary. You may have to duck below branches or even push the boat over shallow spots where silt builds up at

the mouth. But once you get into these creeks, they may deepen and hold quite a few bass. Fish the shadiest side if it's midday. Otherwise, concentrate on the deepest water. Drop your lures close to the bank, but lay them down gently so they don't scare the skittish bass inhabiting these shallow creeks.

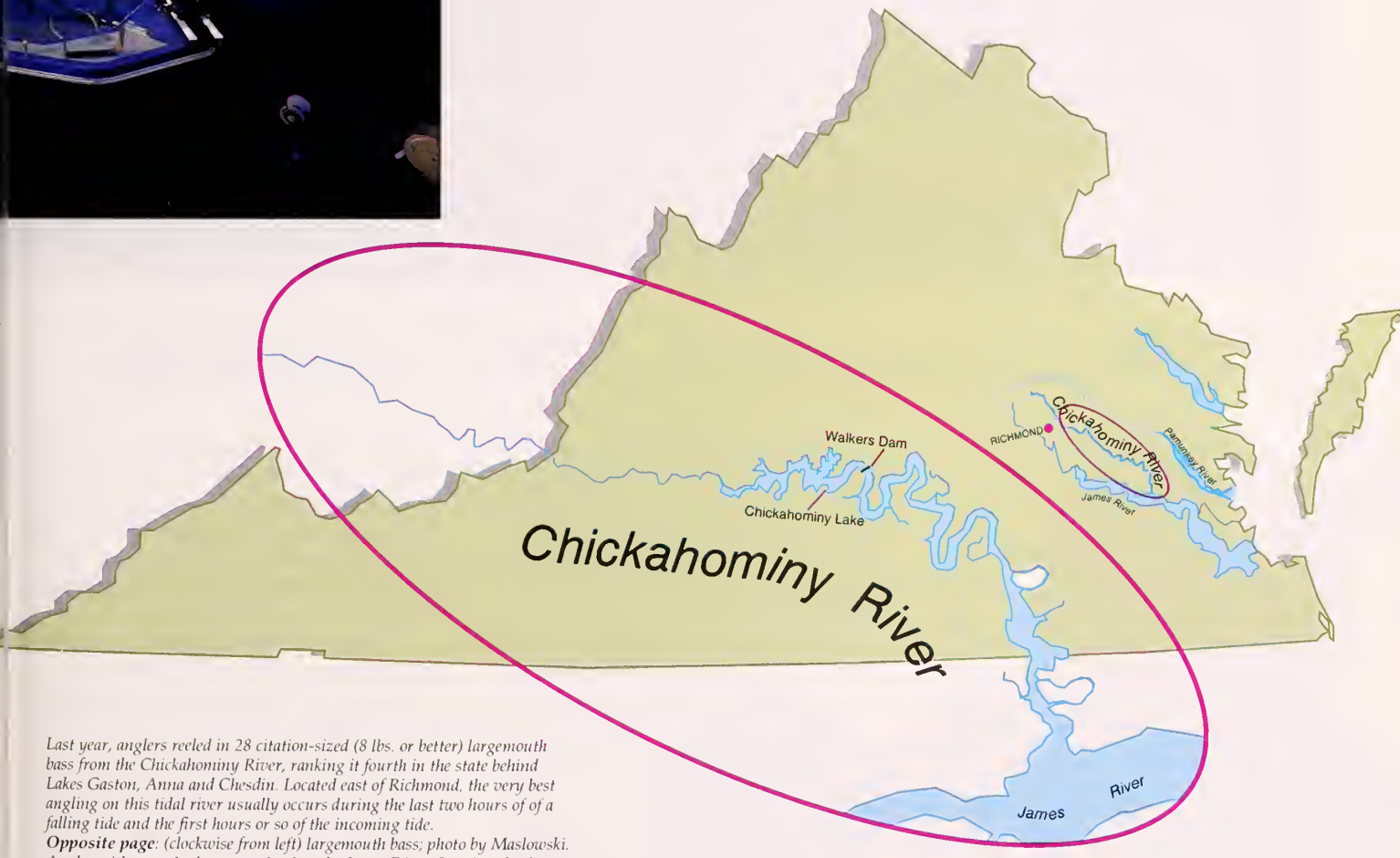


Lily pads, grass banks, cypress trees close to deep water, and brushpiles are all potential payoff spots during a low tide. Medium and shallow-diving crankbaits, spinnerbaits, grubs, tube lures, plastic worms, buzzbaits and topwater plugs can all be effective at these times. To avoid spooking the bass when using plastic worms, stick with the lightest bullet weight you can and still feel bottom.

One odd lure that's often used on the Chickahominy is called the "swimming worm." This is a six-inch plastic worm rigged either on a wire leader or 20-pound monofilament with two wide gap hooks—one protruding from the head of the worm, the other from the middle. The worm is rigged bent so that it spins when retrieved. A ball bearing swivel at the end of the leader helps keep your line from twisting. Fished in the lily pads and near duck blinds and dock pilings with a moderate retrieve, this unique worm can draw vicious strikes from Chickahominy bass.

And speaking of violent strikes, that's another thing you'll notice about tidewater bass. Maybe it's the current they must constantly fight, or maybe it's the salt in the environment, but whatever the reason, tidal largemouths seem to battle harder than similar-sized fish caught in a lake. That's one more good reason to try the Chickahominy this year, or one of its sister brackish rivers that winds like a sinuous brown snake through the lowlands of tidewater of Virginia. □

Gerald Almy is currently a hunting and fishing editor on the staff of Sports Afield *magazine. He lives in Shenandoah County.*



Last year, anglers reeled in 28 citation-sized (8 lbs. or better) largemouth bass from the Chickahominy River, ranking it fourth in the state behind Lakes Gaston, Anna and Chesdin. Located east of Richmond, the very best angling on this tidal river usually occurs during the last two hours of of a falling tide and the first hours or so of the incoming tide.
***Opposite page**: (clockwise from left) largemouth bass; photo by Maslowski. Angler with a trophy largemouth; photo by Larry Ditto. Starting the day on the Chickahominy; photo by Gerald Almy. **Above:** Map by Pels.*

Sporting Clays—

Everything But The Feathers

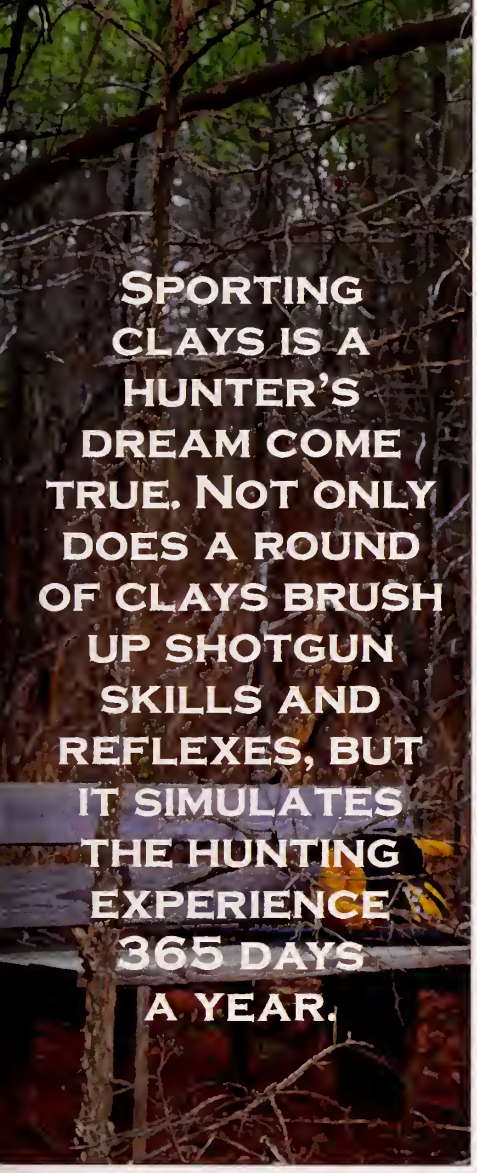
by Steve Ausband

Let's get one thing straight from the outset. This is not an article by an expert sporting clays shooter. I am enthusiastic, but I do not own an expensive vest, a leather shell holder, or a pair of shooting gloves. I walk up to each station in my Red Wings or my jogging shoes, since I don't have any footwear especially designed for clays. Once I even forgot my hunting vest and carried a K-Mart plastic sack with me for my shells and empties from station to station. Nobody sneered.

I don't change chokes at each station, and I use the same Ruger shotgun I use for doves and ducks and everything else. Same handloads, too. I shoot in the 30s—mostly the low 30s—on a 50-bird course. But boy, do I have fun!

Anybody who watched the 440 shooters go through the 200-bird course during the Sporting Clays Nationals held at the Homestead, near Hot Springs, Virginia, last Memorial Day weekend knows that it is possible to become fairly obsessed with this new sport, and to spend megabucks trying to gain an edge over the competition. There were fine guns of every description by every maker, many of them with ports, raised cheekpieces, engraved actions, and the choicest walnut. The best shooters in the nation were there, and to be the "best" in sporting clays is to be very good indeed with a shotgun.

The nicest thing about this new gunning sport, though, is that it can be enjoyed on any level, by anyone with a suitable shotgun—that is, one capable of shooting two shots, *fast*. To me it is primarily a hunter's game, one that duplicates all the best and most exciting shots of real field shooting, serving up thrills, memories of past hunts, and practice for the next season, all at once. For others, it



Like golf courses, no two sporting clays ranges are alike, but all have difficult and easy shots which appeal both to the beginner and the expert shooter. ***Opposite****: photo by Dwight Dyke.* ***Below****: photo by Lee Walker.*

is an exciting and demanding competitive sport, played in beautiful, natural surroundings, and calling for the concentration of professional golf and the reflexes of professional tennis. If you have already tried it, you know how addicting it is. If you haven't tried it, read on.

Every sporting clays range is different. In that way, they are like golf courses. They all have some characteristics in common, however—(again like golf courses)—and the most obvious characteristic is that the 50 shots at an average course go from fairly easy to dizzyingly difficult. You can't throw a rock at a crowd of skeet shooters these days without having a chance of hitting someone who can take 100 birds straight, but you will look long and hard to find anyone who has ever gotten a perfect score on sporting clays.

It's pretty much a rule of thumb that nobody aces the course at a tournament. The guys laying out the menu of offerings at each station will see to that. High score at the big national shoot-off at the Homestead was around 175 for 200 birds, all doubles. There have been a few (a very few) perfect practice rounds at some ranges. The small range where I usually go doesn't attract many world-class shooters, but a couple of guys have broken 46 out of 50 there. I shot at a new range down near Ayden, NC, last weekend. The course high there was by a serious competitor who had put some 70,000 rounds through his newest over/under on clays. In case you are wondering, that's roughly $20,000 worth of good-quality ammunition at discount-house prices. I call that serious shooting. Oh, and his score was 47 out of 50; 93 out of a 100.

That might be a meager score on a skeet range, but it will get you plenty of attention on a sporting clays course. Most range operators tell me that anything around 40 is considered a very good score, and that anything over 45 is worth bragging about for a long time. On the other hand, most average shooters can break a few birds, maybe even a few dozen, the first time they ever try the game, so no one need get too discouraged. I talked to a fellow recently who racked up a score of 11 the first time he shot. He now shoots in the low 40s. He credits determination and good coaching.

The typical sporting clays range provides nice scenery as well as activity. It meanders through pretty woods and fields, perhaps crossing a creek. It might have a pond or a little section of flooded timber. The shooter starts by walking down a path through some pines and hardwoods. Very soon he comes to the first station, where he finds a bench for observers and shooters waiting their turn, a shooting station (generally built out of treated lumber, sometimes raised off the ground or stuck slightly behind a grove of trees), and a trap.

Let us say, just for example, that the first station is called something like "Flushing Pheasants." The shooter takes a single, then a "following pair," then a true double, for a total of five shots. A single, of course, means a single bird, rocketing away at a pretty good speed and usually rising or falling a little at the wrong time and certainly providing an interesting angle for the shooter. A "following pair" means that, after the sound of the shot, another bird will be released. It may be released immediately after the shot, and then again it may not, coming instead two or three seconds later, when the shooter has begun to tighten up in anticipation of the bird. A "true pair" is just a double, two birds released at once. The angles can change—sometimes left, sometimes right, now low, again high, depending on the whimsy of the trap operator—but at least they're all going away from you. This series of more-or-less straight-away shots is usually considered the easiest station on the course. It's a warm-up for the

next station, which we'll say is called "Fur and Feather."

The first time I saw the name "Fur and Feather" tacked to the wall of the shooting station, I laughed. I had just run all five of the pheasants on my very first try at sporting clays, and I was feeling pretty good. "Laugh now," the trap operator said. "This one is tough." He was right.

The "fur" target is meant to simulate a cottontail rabbit on steroids and PCPs. It is fast and insane. The trap throws a hard, wheel-like disk that actually rolls and bounces crazily along the ground, taking completely unpredictable hops, before disappearing into a maze of underbrush or ducking behind an obstructing clay bank. Some ranges have "good" rabbits (that is, hittable ones), and others have "bad" rabbits (more PCPs, more steroids), but no range has easy rabbits. At the sound of the shot, or slightly thereafter, a "bird" is released, soaring high up and away at an outrageous angle and demanding some very fancy gun handling.

Every range I've seen has a "grouse" target. The essentials of a grouse target are close range, close cover, and speed. For me, the grouse target often involves shooting a tree or two, since the grouse are tiny and fast-moving, whereas the trees through which they are moving are large and stationary. Polite shooters do not snicker aloud when their partners shoot more trees than grouse. I do not like the grouse target, and can scarcely bring myself to say anything more about it. If you like your excitement measured in nanoseconds, then the grouse station is just your thing.

My own favorite station is one that duplicates the descent of geese or ducks as they come in for a landing on a pond or a grain field. The targets are launched from a tower hidden behind trees, and they drop down noiselessly out of the sky. It is tricky shooting; the clay discs—or waterfowl—seem to be hovering in midair, almost motionless, while they are actually descending and moving forward at a slight angle to the shooter. For me, there's an interesting aesthetic element involved. If you *think* about where that bird is going, you'll miss it every time, but if you watch it, savor its graceful descent, then mount your gun and swing through it, you'll turn it into a satisfying little gray puffball of smoke. It is as realistic as shooting a non-duck can ever get; the only thing that would make it more like the real thing would be to paint some gaudy yellow feet on the bottom of the target.

There are stations that offer targets coming over the shooter's head from the back. They remind you of doves or wood ducks that take the sneaky way in. There are others that throw the targets over your head from the front, and you have to take them before they get too close, because there is a canopy over the shooting station, and the embarrassment you'd suffer after blowing a section of canopy into the stratosphere would be too great to endure. There are stations that offer "springing teal"—targets that go up like Fourth of July rockets—and others that send targets crossing overhead through the trees. Think of every hard shot you've ever taken in the field. It's there.

Some of the targets used on a sporting clays course look just like the ones on a trap or skeet range, or like the ones you throw with a hand trap on a late summer afternoon. These are known as "standards" and are about 4¼" in diameter and about 1⅛" thick. There are also "midis," which are 3½" and proportionately skinnier (⅞"), and "minis," which are only 2⅜" in diameter and which, from a distance, look remarkably like black, fast-moving aspirin

Try Sporting Clays at Amelia Wildlife Management Area

The Virginia Department of Game and Inland Fisheries' Amelia Sporting Clays Range encompasses 105 acres in Amelia Wildlife Managment Area, located about 30 minutes west of Richmond. With 11 stations, the course takes a shooter from 1½ hours to 2 hours to complete. A minimum group of 3 shooters is required to go the round, with a maximum of 6 in each group of shooters. Reservations are required. Each group is accompanied by Department personnel to ensure that safety precautions are taken.

Prices:
Adults with valid Virginia hunting license—$15
without hunting license-$20
Juniors (12-15 years)—$10
Gift certificates are available.

Hours: Fridays, Saturdays, Sundays
Reservations (required): 804/367-1000 or 367-8464 (Mon.-Fri. 8 a.m.-5 p.m.)

Sporting clays appeals to people of all ages, providing the opportunity to socialize, improve shooting skills, and enjoy the outdoors. It does not require special clothes, special guns, or exceptional skills with firearms. ***Opposite page:*** *A group of shooters are given a safety lesson before beginning the course at Amelia Sporting Clays Range; photo by Dwight Dyke.* ***Left:*** *The shooting sports do not discriminate between men and women, the young or the old; photo by Dwight Dyke.* ***Below:*** *photo by Soc Clay.*

tablets. They are meant to give the appearance of added distance and to make the course a little more challenging. They do so admirably.

The "rabbit" target is the same diameter as the standard, but shaped more like a wheel off a kid's Western Flyer wagon. It is made out of something very hard, to allow it to roll and bounce along the ground on its edge without breaking. If you can hit one, it will break with a load of shot. "Battues" and "rockets" are also the same diameter as standards, but they are thinner to allow for much greater speed and distance. Can you guess how the name "rockets" came about? Battues look somewhat like compact discs, the kind that go in your CD player, only they're black. What makes them so devilish to hit is that they sail flatly through the air for several dozen yards, presenting approximately the target area of a knitting needle, then they turn sideways (so they look easier to hit), and fall almost straight down. Nervous and excitable people should never be allowed on a station which throws battues.

The courses themselves are almost infinitely varied, and course operators change things around from time to time, just to keep the regulars on their toes. A few courses feature nothing but doubles, but most of the ones I have seen offer singles, following pairs, and true doubles at just about every station. A casual shooter or a first-timer can usually ask the trapper to throw him a sample bird from the tougher stations before shooting, just so he will know what to expect. Range operators want their customers to have fun and come back, after all, and they will adjust to make things appropriate for the greenest neophyte or the most grimly competitive shooter.

No single gun or choke is perfect for all stations, and shooters who are serious about competition often change choke tubes from station to station. I don't, preferring to leave in the improved cylinder and modified chokes I use for 90% of my hunting. That's because I want to know what to expect out of these chokes when I take the gun into the field. If I were competing for trophies or dollars, though, I might be screwing in choke tubes with each change of station. On most stations, the more open chokes are the best choice, and many good shooters use nothing but skeet bores.

I have read that sporting clays is the fastest growing of all the shooting sports—it may, in fact, be one of the few shooting sports that is really experiencing much real growth these days. People who have never picked up a shotgun before take up sporting clays and become fanatics. There are ranges appearing everywhere, and I have begun to see more and more business cards of shooting coaches. Most of the major firearms manufacturers are now turning out special "Sporting Clays" models of their most popular shotguns. The cost of an afternoon of clays is minimal—$15 to $25 for an average, 50-round course—and three shooters can walk through all the stations in a little over an hour.

My first off-season practice with a shotgun was on hand-thrown tin cans. Much later I bought a hand trap and a box of clay birds, and many years after that I shot my first round of real skeet. All those were fun, but they were a long way from the real thing. They all lacked something: speed, scenery, unpredictability. But this new game is different. It has everything but the feathers. □

Steve Ausband is the chairman of the English Department of Averett College in Danville, and is a frequent contributor to Virginia Wildlife.

New Books

Complete Guide to Game Fish, a Field Book of Fresh and Saltwater Species, by Byron W. Dalrymple. Available from New Win Publishing, Inc., P.O. Box 5159, Clinton, NJ 08809. Hardcover with black-and-white illustrations. Price: $18.95.

Packing information on 138 freshwater and 190 saltwater species into 506 pages, this revised edition of a guide to game fish of the U.S. is probably of greatest use to those who want a short, concise look at sport fish across the U.S. The author gives the preferred common, regional, and scientific names of each fish, its physical appearance, average weight, distribution and habits along with a few sentences on specific fishing techniques.

Exploring the Chesapeake in Small Boats, by John Page Williams. Available from Cornell Maritime Press, Inc., P.O. Box 456, Centreville, MD 21617. Phone 1-800-638-7641. Softcover. Black-and-white maps. Price: $12.95

Author John Page Williams, education director for the Chesapeake Bay Foundation, has provided the book for anyone who has ever wanted to poke around the tidal creeks and marshes of the Chesapeake Bay in a small boat. Here you will find an overview of what to expect in every season, where to put in and take out (with phone numbers of landings, parks, etc.), and eight chapters describing trips to take on rivers such as the Potomac, the Rappahannock, the James, the Mattaponi, the Pamunkey, and the rivers and creeks of the Eastern Shore and Northern Neck. There's sure to be a trip you haven't tried in this book, which means there's a memorable trip in the making this season for the reader of this book.

Waterfowl: An Identification Guide to the Ducks, Geese and Swans of the World, by Steve Madge. Houghton Mifflin, 215 Park Avenue South, New York, NY 10003. Phone: 212/420-5842. Softcover with 48 pages of color plates by Hilary Burn and 150 global distribution maps. Price: $24.95.

This is the third volume in a series of identification guides and provides the birder with a global interest in waterfowl with in-depth field identification notes, including calls, color description of plumage, measurements, geographical variation, habits, habitat, distribution, and health of populations. Note that this guide is not site-specific and focuses on the countries and regions where these birds are found. ☐

Wildflower Symposium May 14-16

Wintergreen Resort's 10th Annual Spring Wildflower Symposium will once more pay tribute to the Blue Ridge Mountains' wildflowers on May 14-16. One of the highlights of this year's event will be the appearance of Dr. Shoichi Kawano of the University of Kyoto-Japan. Dr. Kawano is head investigator for the North American Temperate Flora research project and is currently conducting his research through the Smithsonian Institute. He will speak on the similarities of Virginia's wildflowers to the flora of East Asia.

This year's Wildflower Symposium will also feature leading experts from the U. S., including Dr. Dennis Whigham, Smithsonian Research Ecologist, who will explore strategies wildflowers use for survival. Nationally known wildflower photographer, Dr. Hal Horwitz of Richmond, whose exquisite photographs often grace the pages of *Virginia Wildlife*, will present a slide lecture on Saturday evening entitled "Impending Bloom," and lead guided "how to" walks on Saturday and Sunday for the wildflower photographer.

In addition, participants will enjoy presentations, workshops and approximately 70 field trips on a variety of other subjects. Registration is $75 per person and includes all symposium-related events. A discounted Wildflower Weekend Package is available, which includes two nights of accommodations in a mountain villa.

For more information or to register, call or write Lorrie Knies, Wintergreen Resort, P.O. Box 706, Wintergreen, VA 22958 at 804/325-2200. ☐

Help for Your Land

Homeowners, landowners, private businesses, and other concerned citizens who have access to land and want to manage it for the benefit of wildlife can now receive assistance from the Virginia Department of Game and Inland Fisheries' (VDGIF) Environmental Education Program. This program has targeted habitat improvement and restoration, aquatic landscaping and outdoor classrooms for schools, in addition to developing a nurserymen plant discount program and a project certification incentive.

This year, the program has hosted four educational programs in various locations around the state, including a wildlife landscaper's certification course, an aquatic habitats workshop, a "designing a backyard habitat" course, and most recently a seminar on aquatic ecosystems and what landowners can accomplish through plantings and water gardening projects.

Literature is also available to the public through this program, including the following: "Plants for Wildlife," "Your Home and the Environment," "A Planting Guide for Virginia's Nectar Seekers," "The Virginia Wildlife Habitat Program," and "Wildlife Plantings, Boxes and Platforms," as well as a complete instructional folder for wildlife landscaping projects.

Those interested in attending future courses or in receiving any of the literature described above should send their names and addresses and

a self-addressed, stamped envelope to Jeff Curtis, Coordinator, Environmental Education Program VDGIF, 4010 W. Broad Street, Richmond, VA 23230-1104. □

Freshwater Fishing Guide Available

The Virginia Department of Game and Inland Fisheries has put together a 27-page fishing guide with information on the public lakes, streams, and rivers in the state with forecasts on where the fish should be biting this season. With specific information on where-to-go (complete with directions and phone numbers), this is one publication you will hold onto all season long. Write to us for your free copy: Virginia Fishing Guide, VDGIF, 4010 W. Broad Street, Richmond, VA 23230-1104. □

Landowner Guide to Wetland Assistance

Do you have a piece of wet ground you'd like to restore or make more hospitable to wildlife? Well, we've got the publication just for you. It's the new "Landowner Guide to Wetland Assistance," produced with the financial support of VDGIF, U.S. Fish and Wildlife Service, Virginia Department of Forestry's Stewardship Program, and Chesapeake Corporation. This handy publication lists public and private organizations that can provide technical expertise, financial assistance and other resources to individuals interested in wetland restoration, enhancement, and protection. It's yours free by writing to: VDGIF, "Landowner Guide to Wetland Assistance," 4010 W. Broad Street, Richmond, VA 23230-1104. □

Letters

A Wonderful Tradition Continues

Enclosed is a check for $10.00 for a subscription to your fine magazine. I am a native Virginian, just transplanted to Texas 20 years ago.

My dad, Garvis M. Reynolds, was a subscriber to your magazine for many years. He passed away February 8, 1993 at his home in Big Island. He was a grand hunter and fisherman and enjoyed all aspects of hunting in the Blue Ridge Mountains from the time he was a small boy until his untimely death. He taught me how to hunt with beagles on rabbits, he loved a good bird dog and quail and grouse hunting as well as coon and bear hunting. He did it all and enjoyed every minute outside. He was a hunter, but above all a conservationist. He knew what the bear and turkey were feeding on, what the fish were doing and how the bobwhites were faring. He always obeyed the game rules and regulations and he had no sympathy for the game violator. I will miss him dearly when hunting season rolls around. We spent many fine times talking dogs and hunting long-distance from Texas to Virginia.

He enjoyed your magazine very much and I plan to continue his tradition of subscribing to your fine publication.

Bonnie Reynolds McKinney
Nongame Division
Texas Parks and Wildlife
Department

Does Anyone Know?

I would like to elicit the aid of the readers of *Virginia Wildlife* in uncovering further information about an old sportsman's club. I have recently obtained a stock certificate issued to my great-grandfather on November 8, 1915. It granted him 10 shares in the Wild Rose Hunting and Fishing Club, incorporated in Richmond and Walkers, Virginia. The secretary and president who signed the certificate are E. (M. or W.) Miller and E. B. Fensom, respectively.

I would like to learn more about this club and would appreciate hearing from anyone who can enlighten me.

Paul G. Brown, M.D.
327 Panorama Drive
Marion, VA 24354

Missing Caption?

First, let me congratulate you on the special photo issue of *Virginia Wildlife* of January 1993. In these times of criticism of the tobacco industry, it is good to see Virginia tobacco farmers given some recognition. After all, tobacco farmers have been so very important to the development and financial growth of our fair state. They are now becoming an endangered species.

I, however, have one complaint. There is a photo of a Campbell County farmer on a tractor (page 29) who is unnamed. He happens to be my son, Mickey Cheatham, who is the fourth generation Cheatham to raise tobacco on the same farm. It has become harder and harder for him to make a living on the land, but he loves it and the independence of being self-employed. He is an avid deer and turkey hunter and has quite a few trophies in his home to prove his skill.

We ran a country store (Cheatham's Store) until 1990 when my husband's heart attack caused him to slow down. He was the third generation to run a store in the same location. It was started in 1915 by his grandfather and continued by his father until his death in 1967. That is when my husband took over and kept it going until the end of 1990. It afforded a pretty good living for four generations of Cheathams, all of whom worked there from time to time in one capacity or another, and provided a gathering place for as many generations of neighbors and friends. We miss the people but not the hassel of trying to compete with supermarket prices.

Our friends and neighbors who have seen the January issue have been disappointed that you did not have the Campbell County tobacco farmer named as were some of the other people. My son couldn't care less, but a proud Mom does.

Again, it was a superb photographic review of Virginia farm life. Thanks.

Mrs Barbara Cheatham
Gladys

Our apologies for not identifying your son in our January 93 magazine. He and your family certainly deserved to be recognized.

Recipes

By Joan Cone

Sunfish Are Super Good!

MENU

Wok Fish Sun

Spinach Salad With Hearts Of Palm

Orange Cheesecake And Strawberries

***Wok Fish Sun**

1½ pounds sunfish, or substitute, fillets (2 to 3 ounces each)
1½ teaspoons cornstarch
1 tablespoon water
1 teaspoon sesame oil
½ teaspoon salt
¼ teaspoon white vinegar
⅛ teaspoon five-spice powder
2 tablespoons vegetable oil
2 cloves garlic, minced
4 slices peeled fresh ginger root
2 medium tomatoes, each cut into 8 wedges
1 package (9 ounces) frozen sugar snap peas, defrosted
1 medium red pepper, cut into l-inch chunks
1 medium green pepper, cut into l-inch chunks
½ cup thinly sliced green onions
2 tablespoons soy sauce

Arrange fillets, slightly overlapping, in 13 x 9-inch baking dish. In small bowl, combine cornstarch, water, sesame oil, salt, vinegar and five-spice powder. Spread cornstarch mixture evenly over fillets, turning to coat. Cover dish with plastic wrap. Chill 1 hour.

In wok, heat vegetable oil over medium-high heat. Add garlic and gingerroot. Stir-fry for 30 seconds, or until browned, stirring constantly. Using slotted spoon, remove and discard garlic and ginger root from oil. Add fish. Stir-fry for 3 to 5 minutes, or until fish is firm and opaque and just begins to flake. Remove fish from wok. Place on serving platter. Cover to keep warm. Set aside.

Add remaining ingredients to wok. Stir-fry for 3 to 4 minutes, or until mixture is hot, stirring constantly. Stir in fish. Serve over hot cooked rice, if desired. Makes 4 servings.

Spinach Salad with Hearts of Palm

3 tablespoons red wine vinegar
2 teaspoons Dijon mustard
1 teaspoon sugar
⅓ cup olive oil
1 pound fresh spinach, stems trimmed
1 can (14 ounces) hearts of palm, drained and sliced
1 teaspoon grated lemon peel

Whisk first 3 ingredients in small bowl and then gradually whisk in oil. Season to taste with salt and pepper. Combine spinach, hearts of palm and lemon peel in bowl. Add enough dressing to season to taste and toss gently. Divide among plates and serve. Makes 5 servings.

****Orange Cheesecake and Strawberries**

This tasty cheesecake has only 137 calories and 12 mg cholesterol per serving.

Crust

1 cup finely crushed vanilla wafers
½ teaspoon ground cinnamon
1 tablespoon egg white
Vegetable oil cooking spray

Cheesecake

1 container (16 ounces) low-fat cottage cheese
1 package (8 ounces) light cream cheese at room temperature
⅓ cup sugar
1 tablespoon all-purpose flour
2 tablespoons orange juice
1½ teaspoons grated orange zest
1 teaspoon vanilla extract
1 large navel orange, sectioned, membranes removed
1 pint ripe strawberries, thinly sliced

Preheat oven to 350 degrees. Combine the vanilla wafers and cinnamon in a bowl. In a separate bowl, whisk the egg white until foamy; blend it into the crumbs with a fork. Spray a 9-inch springform pan with vegetable-oil cooking spray. Press the crumbs in an even layer in the bottom of the prepared pan. Bake 10 minutes. Cool. Reduce the oven temperature to 300 degrees.

Wok Fish Sun; photo reprinted with permission from Cy DeCosse Inc., © all rights reserved.

Using a food processor, combine the cottage cheese, cream cheese, sugar, flour, orange juice, orange zest and vanilla extract until very smooth. Spoon into the prepared crust and smooth the top with a rubber spatula. Bake until set in the center, about 35 to 40 minutes. Cool in the pan. Refrigerate until cold. Loosen the sides of the cake with a small spatula and remove the pan rim. Combine the orange sections and strawberries. Cut the cheesecake into thin wedges and spoon some fruit on each serving. Makes 12 servings.

*Recipe is from *America's Favorite Fish Recipes,* Published by The Hunting and Fishing Library, 1992.
** Recipe is from *The Light Touch Cookbook,* by Marie Simmons, Chapters Publishing Ltd., 1992.

Photo TipS

By Lynda Richardson

Your First Magazine "Assignment"

A month hardly goes by that I don't hear those familiar words from photographers trying to break into the world of magazine photography: "I'd give anything if I could just get my photographs published!"

Well, now you have that chance. I've decided to "play" editor and give you a magazine "assignment." The three photographers who do the best job at covering this assignment will see their work published in *Virginia Wildlife* in my "Photo Tips" column. Accompanying each winning photograph will appear the photographer's name, subject identification and a critique from Yours Truly.

Your assignment is to travel anywhere in Virginia and photograph patterns and textures as seen in nature. This is a fairly broad category, but I want all of you to use your imagination. I will be looking at creativity in the photographer's use of color or lack of color, use of light, and choice of subject matter.

(To help you along the way, a column on patterns and textures will appear in my June 93 "Photo Tips" column.)

"Your First Magazine Assignment" rules are as follows:

1) Photographs must be shot in 35mm slide format. (This is for ease of handling and desirability for magazine use.) Reproduction quality duplicate slides are acceptable if you don't want to send originals.

2) Since this is an "assignment," photographs must be shot between May 15, 1993 and August 2, 1993.

3) Deadline for this assignment is August 2, 1993. All photographs must be postmarked by August 2, 1993. Mail to: Photo Tips Assignment, c/o *Virginia Wildlife*, P.O. Box 11104, Richmond, VA 23230-1104. I recommend sending your photographs by certified or registered mail or by a courier such as Federal Express which uses tracking numbers to locate lost packages. Submissions received after the deadline will be returned unopened.

4) All submissions must be accompanied with a self-addressed, stamped envelope (SASE). Submissions without SASEs will not be returned! Whatever mailing method you choose, don't forget to include an additional envelope with enough postage or a filled out Federal Express form including your account number for us to return your slides to you. Do not send money, checks or loose stamps.

5) Slides will only be accepted if they are submitted in clear plastic slide storage sheets between two pieces of rigid cardboard. Slide sheets should be available at your local camera store.

6) On the front/bottom of each slide must appear your name, address and telephone number. Also, on the front of your slide, please draw an arrow to indicate the top of your slide. Number each slide. Slides will not be accepted if this information is not included on every slide.

7) Include with your entry a "Delivery Memo." This is a sheet of paper which has your name, address and telephone number at the top and a listing of your slides and a total of how many slides you are sending.

Refer to each slide by number in the Delivery Memo and include any necessary caption information. Don't forget to make a copy for yourself so you can make sure we get all your slides back to you.

8) Submission limit is five slides per person.

9) Neither *Virginia Wildlife* nor Lynda Richardson will be responsible for the receipt of damaged slides or the return of slides not accompanied by a self-addressed stamped envelope.

10) Though this is called an "assignment," photographers will not be financially compensated for the use of their images, expenses incurred while shooting, film and processing or for time spent on assignment.

These rules might sound like alot of trouble, but this is to give you an idea of what photographers have to go through to sell their photographs. So, take this opportunity to make it an adventure, have fun, and challenge yourself! Good luck, and I will look forward to reviewing your assignments. □

"Johnny jump-ups" provide a colorful subject for a study in patterns and textures; photo by Lynda Richardson.

Safety

by Col. William Antozzi, Boating Safety Officer

GPS is Boon to Boaters

Not many boaters have a need for the global positioning system (GPS) which is now available, but those who consider themselves to be professionals should know what it is and how it works.

GPS is a satellite navigation system in which satellites constantly gather information from the Earth's surface and beam it back to GPS receivers. Some receivers have five channels and can accept information from five satellites simultaneously and provide boaters with a location by means of a fix including latitude, longitude and even altitude. Boaters are not usually interested in altitude.

Each satellite is equipped with a transmitter that continually sends coded signals down to Earth. The GPS receiver below, mounted in a boat, plane or other vehicle, "hears" the signal and calculates distance from the transmitting satellite. This is possible because the receiver knows two things. First, that like light, radio signals travel at 186,000 miles a second. And second, it knows the time it received the signal. The trick, of course, is for the receiver to figure out when the signal left the satellite. It takes a lot of computer power to decode the incoming messages and to run the math, but the receiver does it. The computer now imagines the satellite at the center of a sphere with a radius of the known distance. This sphere intersects the Earth along a broad path. The receiver is located somewhere on this path. Now the receiver listens to another satellite and another path is plotted. A third satellite and then a fourth satellite are used so that finally the paths (lines of position) intersect at a point definable in latitude, longitude and altitude. Two-D fixes require only three satellites.

GPS is a satellite navigation system operational 24 hours a day which provides locational information to boaters; photo by Mel White.

Position accuracy is usually within 90 feet, but there is something called Selective Availability (SA) which can degrade position accuracy down to about 100 yards. SA can be used by the military forces to downgrade accuracy in case there is a military threat or/the system is being used by unfriendly agencies. The military forces can turn SA on or off.

Some GPS receivers can facilitate navigation by storing almost a hundred waypoints and up to 10 preprogrammed routes. Once a vessel's position is provided, some receivers can automatically calculate range and bearing to any waypoint such as a buoy. They also provide information on speed over ground, course over ground, and estimated time enroute.

So far, test results show that GPS is unaffected by thunderstorms or other bad weather and is operational 24 hours a day.

There are about 19 satellites in orbit with 17 or 18 operational. Very soon there should be 24 operational satellites in orbit. GPS has great potential and should provide the most reliable information available until something better is invented.

On the horizon is something new. U. S. Coast Guard radio beacon stations are being equipped to transmit "differential" GPS signals which would be the same as regular GPS signals which are not being interfered with by SA. The CG station signals should cover the U.S. Atlantic, Pacific and Gulf of Mexico coast lines with an estimated offshore range of 100 miles and possibly as much as 200 miles. Installation of the system should be complete by 1996. □

By Spike Knuth

May Crescendo

Brown pelicans nesting on Fisherman's Island in May; photo by Pels.

A coastal marsh in May is full of movement and noise and drama—especially if you're a bird! By mid-May, many birds are already feeding the young of their first broods, while latecomers are just in the process of building their nests.

A wood duck hen leads a brood of six downy chicks through the dark water at the edge of the marsh with the drake tagging along nearby. Now as the chicks grow each day, the drake's long nesting vigil that began in February becomes unnecessary. Soon he'll fly off to a secluded spot to join other drakes to molt and renew his feathers.

A little male least tern fishes intensely, not for himself, but for his mate. With quick wingbeats, he hovers against the freshening breeze over the shallows, then dives to deftly pluck out a small fish. He carries it back to the female waiting patiently on a mud flat. Then with much chattering and wing fluttering, he feeds the gift offering to her and flies off to repeat the process.

Kingbirds find the open coastal marshlands to their liking, too, even though they are thought of as birds of the meadows. This member of the flycatcher family is apparently just setting up housekeeping, busily plucking cattail fuzz and fluffy fibers from other old flowers of last summer, along with fine, dried grasses for use in building its nest.

A great crested flycatcher is doing the same thing, but has chosen a bird house that had been set up over a shallow slough. Normally a forest bird, the flycatcher picked a spot close to mixed loblolly pine and oak forest.

There is some skullduggery going on too. A fiesty red-winged blackbird chases a snowy egret on a zig-zag course through the reeds and rushes. Undoubtedly the egret had designs on eggs for dinner. With epaulets flashing, the redwing scolded and chased the egret and actually got up behind it and grabbed its plumes!

In a similar episode, but with a different outcome, four boat-tailed grackles noisely pursued a ring-billed gull. The gull carried one of the grackle chicks locked tight in its beak. It had a family to feed, too.

Food-getting for self and young is a prime concern for wildlife, and each does it in their own way. Glossy ibises wade in the shallows, feeding vigorously with their sickle-shaped bill as they garner aquatic worms, insects, mollusks and crustaceans. In contrast, the black-crowned night heron is a picture of patience. It waits quietly—statue-still—for minutes on end until a fish, frog or crab swims within range. The snowy egret doesn't wait for its prey, but goes after it where it lives, shuffling its feet to scare it out into the open. But you may see one crouch low and actually lean its head over sideways to present the lowest possible profile as it stalks a fish. The great egrets fish by stretching their long necks out, and leaning forward for a better view. The little green-backed heron will often fish near an outlet pipe connecting two flowages waiting for the current to bring it dinner.

May is the month that brings a crescendo of sound and activity. May is the pivotal month that may decide how many or how few of a given species will return next year to continue the cycle. There'll be more chances into June, July and August, but with each successive renest, the broods get smaller and their chances of survival gets slimmer.

Birds can withstand and overcome the natural battles of life. They can't, however, overcome the unnatural. Without places to live, there is no chance for success. Birds that live and depend on coastal marshes can't live in subdivisions and shopping centers. Without our coastal marshes there would be no May crescendo. □

Show How Much You Care...

...Give To Virginia's Nongame and Endangered Species Fund

Many of Virginia's wildlife are in danger. Suffering from habitat loss and the dangers of pollution which threaten their survival, many species in the state are struggling to survive.

The Department of Game and Inland Fisheries is responsible for the protection and conservation of all wildlife in Virginia, but we receive no state tax dollars, and we need your help to do our job. Help us fund critical research and management programs for the state's nongame and endangered species by contributing to our Nongame Wildlife Fund, which is supported by voluntary contributions made through our state tax checkoff program and direct giving.

This year, please make a donation on your state income tax form or simply send in your tax-deductible check (made payable to the Treasurer of Virginia) to: Virginia Nongame Wildlife Fund-VW, Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104.

Swainson's thrush and trillium, photo by Rob and Melissa Simpson.

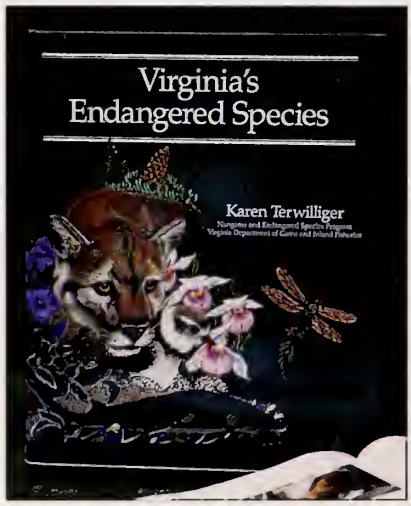


photo by Roy Edwards

Resource Guide Available On Virginia's Endangered Species

Order the only comprehensive resource guide on Virginia's Endangered Species for $32.94 (softcover) or $59.95 (hardcover). This 675-page guide identifies and describes more than 250 rare and endangered plants and animals in Virginia. Produced by the Virginia Department of Game and Inland Fisheries and other state natural resource agencies, this book documents the latest scientific information on Virginia's endangered species, information which is available in no other publication, *anywhere*.

Send your check plus 4.5 percent sales tax and $3.00 ship and handling charges to: McDonald and Woodward Publishing Company, P.O. Box 10308, Blacksburg, VA 24062-0308. Phone: (703) 951-9465.

To order a Virginia's Endangered Species poster featuring the cover illustration on the book (*left*), please send a check for $8 (made payable to: Treasurer of Virginia) to: VA Endangered Species Poster Offer, Attn: Diane Davis, VDGIF, P.O. Box 11104, Richmond, VA 23230-1104.

Preserving in bronze what we're losing in the wild

An Endangered Species Series by Turner Sculpture

Capturing the essence of Virginia's endangered species in bronze, David Turner of Turner Sculpture has just completed the second in his limited edition series to raise funds for Virginia's Nongame and Endangered Species Program.

This time, David has turned his artist's eye toward one of Virginia's rarest mammals, the Northern flying squirrel. An elusive, elf-like spirit of our mountaintop spruce forests, this tiny squirrel weighs no more than five ounces and is known only to three locations in Virginia. Strictly nocturnal, it emerges from its nest of shredded bark, lichens, and moss once darkness has fallen and glides silently from tree to tree, its outstretched feet unfurling the parachute-like flaps of skin attached to each wrist and ankle.

Here, David Turner's 7" high sculpture of a Northern flying squirrel (photo approximates actual size) is poised for flight on an old-growth snag covered with the lichens and bracket fungus which make up a large part of its diet.

Like the bronze sculpture of the Bewick's wren also featured on this page (less than 100 are left for sale), a limited edition of 200 Northern flying squirrels will be cast and sold solely to benefit Virginia's Nongame and Endangered Species Program, the program responsible for the management and protection of all the Commonwealth's rare and endangered wildlife. The money raised from the sale of these two sculptures will provide the program with over1/10th of its present operating budget.

Each sculpture has a purchase price of $325. Turner Sculpture will receive $175 to cover their production costs, while the remaining $150 will be sent to the Virginia Department of Game and Inland Fisheries as your contribution to Virginia's Nongame and Endangered Species Fund. A tax advisor should be consulted regarding the personal tax deductibility of this contribution. Each piece sold will include a certificate of origin and a letter confirming your contribution to the future of Virginia's wildlife.

You may order either the Northern flying squirrel or the Bewick's wren by sending a $325 check for each signed and numbered sculpture to: Turner Sculpture, Box 128, Onley VA 23418. For credit card orders, call: 804/787-2818. **Note:** If you have already purchased a Bewick's wren and would like the same limited edition number in the Northern flying squirrel edition, please send in your order as soon as possible.

Bewick's wren (height: 12 inches) by David Turner. Available for $325.

TURNER SCULPTURE

VIRGINIANS CARE Nongame Wildlife Fund

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